



## **Compositions and Methods for Non-targeted Activation of Endogenous Genes**

### ***Abstract***

The present invention is directed generally to activating gene expression or causing over-expression of a gene by recombination methods in situ. The invention also is directed generally to methods for expressing an endogenous gene in a cell at levels higher than those normally found in the cell. In one embodiment of the invention, expression of an endogenous gene is activated or increased following integration into the cell, by non-homologous or illegitimate recombination, of a regulatory sequence that activates expression of the gene. The invention also provides methods for the identification, activation, isolation, and/or expression of genes undiscoverable by current methods since no target sequence is necessary for integration. Thus, by the present invention, endogenous genes, including those associated with human disease and development, may be activated and isolated without prior knowledge of the sequence, structure, function, or expression profile of the genes.